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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PYZOCHA, MICHAEL J

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,573

Applicant(s)

KLINGLER ET AL.

Examiner

Michael Pyzocha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04262002, 07152002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-5 and 18-30 are pending.
2. Response filed on 05/02/2005 has been received and considered.

Election/Restrictions

3. Claims 6-17 and 31-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/02/2005. These claims should be canceled in the next response.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-5, 18-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 1 recites the limitation "the message" in various parts of claim 1. There is insufficient antecedent basis for this limitation in the claim because it is unclear if it is referring to the message for transmission or the control message.

7. Claim 18 recites the limitation "the message" in various parts of the claim. There is insufficient antecedent basis for this limitation in the claim because it is unclear if it is referring to the message for transmission or the control message.

8. Claims 18-19, 21, 25, 27 and 29-30 recite the limitation "encryption/decryption" it is unclear whether this means "encryption or decryption" "encryption and decryption" or "encryption and/or decryption." For the purpose of examination with regard to prior art it will be assumed "encryption/decryption" means "encryption or decryption."

9. Claim 23 recites the limitation "the base station" in line 2. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 24 recites that the LCC message is two different messages; it will be assumed that the LCC message is one of the two.

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11. Any claims not specifically addressed are rejected by virtue of their dependencies.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 25-27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malek et al (US 5243653) and further in view of Lynn et al (US 5345508).

As per claim 25, Malek discloses at least one digital signal processing means; at least one central processing means; and encryption synchronization means configured to detect a particular control message in a data transmission and, in response, wherein the particular control message occurs just before the transmission of telephony data (see column 4 lines 47-57).

Malek fails to disclose initiating an encryption/decryption process.

However, Lynn teaches initiating an encryption/decryption system (see column 2 lines 54-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Lynn's method for initiating an encryption/decryption process in Malek.

Motivation to do so would have been to provide self-synchronization (see Lynn column 2 lines 47-51).

As per claim 26, the modified Malek and Lynn system discloses the encryption synchronization means is further configured to provide a current encryption key to receiving devices and sending devices in the wireless communication network (see Lynn column 2 lines 47-51).

As per claim 27, the modified Malek and Lynn system discloses the encryption synchronization means is further configured to count data blocks in a message being transmitted to determine when to begin encryption/decryption (see Lynn column 5 line 40 through column 6 line 23).

As per claim 30, the modified Malek and Lynn system discloses the initiation of the encryption/decryption process occurs each time a wireless connection is set up, comprising initial connection, connection hand off, and connection reestablishment after unexpected connection loss (see Malek column 4 lines 47-57).

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14. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek and Lynn system as applied to claims above, and further in view of Chien et al (US 20020165972).

As per claim 1, the modified Malek and Lynn system discloses processing a message for transmission, wherein the message includes control data and payload data, and wherein the control data is not encrypted; determining whether the control data contains a particular control message; if the control data contains the particular control message, loading an encryption synchronization counter with a number of control message bytes to be transmitted and initializing the encryption synchronization counter; when the encryption synchronization counter is decremented to zero, indicating that the entire message has been transmitted, initializing the cryptosystem using a key; using the cryptosystem to encrypt the message; parsing the message to separate the control data from the payload data; determining whether the control data contains the particular control message; if the control data contains the particular control message, initializing the cryptosystem using the key; and using the cryptosystem to decrypt the message (see Malek column 4 lines 47-57; and see Lynn column 2 lines 54-64 and column 5 line 40 through column 6 line 23 as applied above).

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The modified Malek and Lynn system fails to disclose the use of an encrypted airlink packet for transmission over an airlink.

However, Chien teaches the use of an encrypted airlink packet (see paragraph 81).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the airlink packet of Chien in the modified Malek and Lynn system.

Motivation to do so would have been provide airlink filtering (see paragraph 65).

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn and Chien system as applied to claim 1 above, and further in view of Bender (US 6366779).

As per claim 2, the modified Malek, Lynn and Chien system fails to disclose the control message is a link control channel message.

However, Bender teaches such a message (see column 14 lines 38-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the modified Malek, Lynn and Chien system's control message to be a link control channel message.

Motivation to do so would have been to allow the base station to initiate a call (see column 14 lines 38-62).

16. Claims 3-5, 18-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn and Chien system as applied to claims above, and further in view of Schneier (Applied Cryptography).

As per claim 3, the modified Malek, Lynn and Chien system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Malek, Lynn, and Chien system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

As per claim 4, the modified Malek, Lynn, Chien, and Schneier system discloses performing a mathematical operation on the key to alter the key for security, wherein the key is an array of data (see Lynn column 2 lines 54-64); and operating on a state box using the altered key, wherein the state box is an array of data (see Schneier pages 397-398).

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As per claim 5, the modified Malek, Lynn, Chien, and Schneier system discloses a RC4 state box and key (see Schneier pages 397-398).

As per claims 18-19, the limitations are substantially the same as claim 1 with the addition of a state box, and are therefore rejected as in claim 3.

As per claim 20, the modified Malek, Lynn, Chien, and Schneier system discloses sending an encryption key (see Lynn column 2 lines 54-64).

As per claim 21, the modified Malek, Lynn, Chien, and Schneier system discloses changing the encryption key according to a predetermined algorithm (see Lynn column 2 lines 54-64).

As per claim 23, the modified Malek, Lynn, Chien, and Schneier system discloses the method being performed each time the base station participates (see Malek column 4 lines 47-57).

17. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn, Chien, and Schneier system as applied to claim 18 above, and further in view of Dent (US 5060266).

As per claim 22, the modified Malek, Lynn, Chien, and Schneier system fails to disclose the method being performed at the associated control channel level.

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However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the modified Malek, Lynn, Chien, and Schneier system at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see column 7 lines 12-31).

18. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn, Chien, and Schneier system as applied to claim 18 above, and further in view of Bender and NetBEUI (webpage).

As per claim 24, the modified Malek, Lynn, Chien, and Schneier system fails to disclose the particular control message is a link control channel ("LCC") message that is a "set asynchronous balance mode" ("SABM") message and a "set asynchronous balance mode unnumbered acknowledge" ("SABMUA") message.

However, Bender teaches the LCC message (see column 14 lines 38-62) and NetBEUI teaches the SABM message (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the messages of the

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modified Malek, Lynn, Chien, and Schneier system to be those of Bender and NetBEUI.

Motivation to do so would have been to allow the base station to initiate a call (see Bender column 14 lines 38-62) and to conform to the 802.2 protocol standard (see page 1).

19. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek and Lynn system as applied to claim 26 above, and further in view of Schneier (Applied Cryptography).

As per claim 28, the modified Malek, Lynn and Chien system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Malek and Lynn system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

20. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek and Lynn system as applied to claim 25 above, and further in view of Dent (US 5060266).

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As per claim 29, the modified Malek, Lynn, Chien, and Schneier system fails to disclose the method being performed at the associated control channel level.

However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the modified Malek and Lynn system at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see column 7 lines 12-31).

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kallin et al (US 5119502) teaches detecting a control message and Hoole et al (US 6480522) teaches LCC messages and encryption of data in a wireless system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP



**ANDREW CALDWELL
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